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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/536,952	03/28/2000	Carl E. Clark	POU9-2000-0030-US1	5903

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EXAMINER

OPIE, GEORGE L

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 06/23/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/536,952

Examiner

George L. Opie

Applicant(s)

Clark et al.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ☐ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ☐ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) ☐ is/are objected to.
- 8) ☐ Claim(s) ☐ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ☐ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ☐ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) ☐.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☐ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ☐.
- 17) ☐ Interview Summary (PTO-413) Paper No(s). ☐.
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☒ Other: Text Doc for 5,493,661

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DETAILED ACTION

1. The Request for Continued Examination, filed on 25 March 2004, is acceptable and an RCE has been established.

2. This Office Action is responsive to Amendment A, filed 23 February 2004, in which claims 1, 11, 21 & 31 were amended.

The Office acknowledges Applicant's inclusion of an electronic copy of the amendment on a 3½ inch floppy disk, and the Office would like to thank Applicant for submitting the amendment in electronic form to expedite its processing.

Please help expedite the prosecution of this application by including, along with your amendment response in paper form, an electronic file copy in WordPerfect, Microsoft Word, or in ASCII text format on a 3½ inch IBM format floppy disk. Please include all pending claims along with your responsive remarks. Only the paper copy will be entered -- your floppy disk file will be considered a duplicate copy. Signatures are not required on the disk copy. The floppy disk copy is not mandatory; however, it will help expedite the processing of your application. Your cooperation is appreciated.

3. The U.S. Patents used in the art rejections below have been provided as text documents which correspond to the U.S. Patents. The relevant portions of the text documents are cited according to page and line numbers in the art rejections below. For the convenience of Applicant, the cited sections are highlighted in the *text documents*. Consistent with Office procedure, the U.S. Patents corresponding to the *text documents* are also included with this action.

4. Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark et al. (U.S. Patent 5,361,356) in view of Alpert et al. (U.S. Patent 5,493,661).

As to claim 1, Clark teaches a method for producing a secure subspace for a transaction (invention . . . protects subspace data and programs from inadvertent accesses from other subspaces, p1 28-57) comprising:

from an operating system task (operating system dispatch program, p8 25-34) having an associated dispatchable unit access list (DU-AL) (dispatching process for a task ... contains a DUALD, p13 12-40) attaching a subtask that will restrict application addressing (restrict the addressability of each of these programs, p7 30-56) and

wherein said attaching includes defining a one subspace address environment of the plurality of subspace address environments as home space (definition of a subspace group of address spaces, involving the storing of an identifier of the group, p13 12-40) within a dispatchable unit access list (DU-AL) associated with said subtask (dispatching process for a task ... contains a DUALD, Id.).

Clark does not explicitly disclose the additional limitations detailed below.

Alpert teaches the subspace with a plurality of subspace address environments and homespace defined as base space (in the IBM MVS the base space is equivalent to the home address space, p6 15-44) and the DU-AL associated with the subtask includes only the home space definition (identifying the base space and retrieving the associated control information, p10 12-19).

It would have been obvious to combine Alpert's teachings with Clark because the control table provides an efficient structure for managing process restrictions.

As to claim 2, Clark teaches a system of restricting "programs that are in basespace/subspace types of address spaces in a single family group", p7 30-56, and inherent in this would be the instantiation of the recited first and second tasks, subspaces and applications that implement the secure isolation operations for multiple families to execute separated transactions.

As to claim 3, Clark (p8 11-24) teaches "isolation by not providing a transaction with information for accessing its calling program in another address space."

As to claim 4, Clark (p10 7-18) teaches the "operating system ... is mapped into all address spaces it supports."

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As to claims 5-6, note the claim 2 discussion supra.

As to claim 7, Clark (p13 12-40) teaches "for each task to be done by the computer. . . several associated control blocks are generated by the operating system" including the "DU-AL 66 . . . which contain the real addresses for locating the ASTEs which respectively represent all subspaces".

As to claim 8, Clark (abstract) teaches the "BSG instruction has an operand defining a general register containing the target virtual address and an associated access register containing an access-list-entry-token (ALET) defining the target address space.

As to claims 9-10, note the claim 2 discussion supra.

As to claims 11-20, note the rejections of claims 1-10 above. Claims 11-20 are the same as claims 1-10 except claims 11-20 are computer program product claims and claims 1-10 are method claims.

As to claims 21-30, note the rejections of claims 1-10 above. Claims 21-30 are the same as claims 1-10 except claims 21-30 are apparatus claims and claims 1-10 are method claims.

As to claim 31, note the rejection of claim 1 above. The limitations in claim 31 are functionally equivalent to the claim 1 limitations.

6. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure. Specifically, the below reference(s) will also have relevancy to one or more elements of the Applicant's claimed invention as follows:

U.S. Patent No. 5,745,676 to Hobson et al. which teaches the secure execution of program groups using subspace identification/allocation;

U.S. Patent No. 5,319,758 to Arai et al. which teaches the creation of subspaces and home space with respect to program groupings;

U.S. Patent No. 4,979,098 to Baum et al. which teaches the fundamental algorithm and structures in secured subspace operations for transaction efficacy.

7. Response to Applicant's Arguments:

Applicant's remarks accompanying Amendment A, have been considered but are moot in view of the new grounds of rejection.

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The Office acknowledges Applicant's inclusion of an electronic copy of the amendment on a 3½inch floppy disk, and the Office would like to thank Applicant for submitting the amendment in electronic form to expedite its processing.

8. Contact Information:

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private-PAIR or Public-PAIR.

Status information for unpublished applications is available through Private-PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

- ☐ All responses sent by U.S. Mail should be mailed to:

**Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450**

- ☐ Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist). All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses directly to the Examiner.


The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

All OFFICIAL faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in

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which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the Office, e.g., Finance Division for fee charging, etc.

- ☐ Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at **(703) 305-9600**.
- ☐ Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Opie at (703) 308-9120 or via e-mail at *George.Opie@uspto.gov*. Internet e-mail should not be used where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is an express waiver of the confidentiality requirements under 35 U.S.C. 122 by the Applicant. Sensitive data includes confidential information related to patent applications.


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SUPERVISORY PATENT EXAMINER
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